

AMENDMENTS TO THE CLAIMS

The claims relating to the above-captioned patent application, as amended herein and with the status thereof, are as follows:

1. (Currently Amended) A method for operating a microelectromechanical system that is fabricated using a substrate and that comprises an elongate coupling microstructure ~~interconnected with~~ located between and interconnecting a lever microstructure and an actuator assembly microstructure, as well as a mirror microstructure that is spaced from said lever microstructure and that is interconnected with a portion of said lever microstructure that is movable relative to said substrate, wherein said elongate coupling microstructure comprises first and second coupling ends, said method comprising the steps of:

moving said actuator assembly microstructure relative to said substrate;

accelerating said elongate coupling microstructure in response to said moving said actuator assembly microstructure step;

compressing said elongate coupling microstructure between said first and second coupling ends during at least a portion of said accelerating step;

moving said first lever end relative to said substrate in response to said accelerating step, wherein said moving said first lever end step is at least substantially solely controlled by external forces that are exerted on said elongate coupling microstructure during said accelerating step; and

moving said mirror microstructure relative to said substrate in response to said moving said first lever end step.

2. (Currently Amended) A method, as claimed in Claim 1, wherein:

~~said accelerating step comprises moving an actuator assembly microstructure relative to said substrate, wherein said actuator assembly microstructure comprises at least one actuator microstructure.~~

3. (Original) A method, as claimed in Claim 1, wherein:

at least a portion of said accelerating step is due to inertial forces.

4. (Currently Amended) A method, as claimed in Claim 1, wherein:

said moving said first lever end step comprises moving said first lever end along an at least generally arcuate path.

5. (Currently Amended) A method, as claimed in Claim 1, wherein:

said moving said first lever end step is within a first reference plane that is at least substantially perpendicular to a general lateral extent of said substrate.

6. (Currently Amended) A method, as claimed in Claim 1, wherein:

said ~~executing a first~~ moving a first lever end step is within a first reference plane that is disposed other than in perpendicular relation to a general lateral extent of said substrate.

7. (Original) A method, as claimed in Claim 1, wherein:

said accelerating step comprises exerting a force on said elongate coupling structure microstructure having a component in an x direction of at least about 20 μ N, wherein said x direction is parallel with a general lateral extent of said substrate.

8. (Original) A method, as claimed in Claim 1, wherein:

said compressing step comprises at least substantially precluding storage of any potential energy in said elongate coupling microstructure.

9. (Currently Amended) A method, as claimed in Claim 1, wherein:

said moving said first lever end step comprises forming said elongate coupling microstructure with a buckle strength between said first and second coupling ends of said elongate coupling microstructure that is greater than a maximum magnitude of a component of a force in an x direction that is exerted on said elongate coupling microstructure used by said accelerating step, wherein said x direction is parallel with a general lateral extent of said substrate.

10. (Currently Amended) A method, as claimed in Claim 1, wherein:

said moving said first lever end step comprises at least substantially precluding flexure between ~~opposite~~ said first and second coupling ends of said elongate coupling microstructure during said accelerating step.

11. (Canceled)

12. (Currently Amended) A method, as claimed in Claim ~~11~~1, wherein:

said moving said mirror microstructure step comprises moving said mirror microstructure from a first position to a second position in no more than about 20 milliseconds.

13. (New) A method for operating a microelectromechanical system that is fabricated using a substrate and that comprises an elongate coupling microstructure located between and interconnecting a lever microstructure and an actuator assembly microstructure, as well as a mirror microstructure that is interconnected with a portion of said lever microstructure that is movable relative to said substrate, wherein said elongate coupling microstructure comprises first and second coupling ends, said method comprising the steps of:

executing a first moving step comprising moving said actuator assembly microstructure relative to said substrate in one direction;

pulling on said elongate coupling microstructure in response to said first moving step;

executing a first increasing step comprising increasing a spacing between said first lever end and said substrate in response to said pulling step;

executing a second increasing step comprising increasing a spacing between said mirror microstructure and said substrate in response to said first increasing step;

executing a second moving step comprising moving said actuator assembly microstructure relative to said substrate in a different direction than said first moving step;

pushing on said elongate coupling microstructure in response to said second moving step;

accelerating said elongate coupling microstructure in response to said second moving step;

compressing said elongate coupling microstructure between said first and second coupling ends during at least a portion of said accelerating step;

executing a first decreasing step comprising decreasing a spacing between said first lever end and said substrate in response to said accelerating step, wherein said first decreasing step is at least substantially solely controlled by external forces that are exerted on said elongate coupling microstructure during said accelerating step; and

executing a second decreasing step comprising decreasing a spacing between said mirror microstructure and said substrate in response to said first decreasing step.

14. (New) A method, as claimed in Claim 13, wherein:

said actuator assembly microstructure comprises at least one actuator microstructure.

15. (New) A method, as claimed in Claim 13, wherein:

at least a portion of said accelerating step is due to inertial forces.

16. (New) A method, as claimed in Claim 13, wherein:

said first increasing step comprises moving said first lever end along an at least generally arcuate path.

17. (New) A method, as claimed in Claim 13, wherein:

movement of said first lever end in said first increasing step is within a first reference plane that is at least substantially perpendicular to a general lateral extent of said substrate.

18. (New) A method, as claimed in Claim 13, wherein:

movement of said first lever end in said first increasing step is within a first reference plane that is disposed other than in perpendicular relation to a general lateral extent of said substrate.

19. (New) A method, as claimed in Claim 13, wherein:

said accelerating step comprises exerting a force on said elongate coupling structure microstructure having a component in an x direction of at least about $20\mu\text{N}$, wherein said x direction is parallel with a general lateral extent of said substrate.

20. (New) A method, as claimed in Claim 13, wherein:

said compressing step comprises at least substantially precluding storage of any potential energy in said elongate coupling microstructure.

21. (New) A method, as claimed in Claim 13, wherein:

said first decreasing step comprises forming said elongate coupling microstructure with a buckle strength between said first and second coupling ends of said elongate coupling microstructure that is greater than a maximum magnitude of a component of a force in an x direction that is exerted on said elongate coupling microstructure used by said accelerating step, wherein said x direction is parallel with a general lateral extent of said substrate.

22. (New) A method, as claimed in Claim 13, wherein:

said first decreasing step comprises at least substantially precluding flexure between said first and second coupling ends of said elongate coupling microstructure during said accelerating step.

23. (New) A method, as claimed in Claim 13, wherein:

said second decreasing step comprises moving said mirror microstructure from a first position to a second position in no more than about 20 milliseconds.